

5

## CLAIMS

sub A1  
1. A voltage level translator for operating an operational amplifier integrated circuit designed for operation with a single ended power supply, to operate with a split level power supply having a center tapped ground, comprising:

10 first means for connecting a first polarity power supply terminal of the operational amplifier integrated circuit to a first polarity of the power supply,

second means for connecting a second polarity power supply terminal of the operational amplifier integrated circuit to a second polarity of the split level power supply, and

15 means for connecting a signal input terminal of the operational amplifier to a center tapped ground of the split level power supply.

2. The voltage level translator of claim 1 wherein another signal input terminal of the operational amplifier is coupled to a signal source referenced to ground without any DC isolation capacitors connected in series with the amplifier and the output  
20 terminal of the operational amplifier is coupled to a signal load referenced to ground without any DC isolation capacitors connected in series with the amplifier.

3. The voltage level translator of claim 2 wherein the signal load is a loudspeaker having one terminal referenced to ground.

4. The voltage level translator of claim 1 wherein the amplifier includes a  
25 plurality of amplifiers on the same integrated circuit chip having a common substrate, and all of the plurality of amplifiers are also voltage level translated, the substrate being biased the same amount with respect to each of the plurality of amplifiers.

5. The voltage level translator of claim 1 wherein the split level power supply having a center tapped ground also provides power to other circuits performing other  
30 functions.

6. The voltage level translator of claim 5 wherein the amplifier output load is an earphone and the other circuits performing other functions is a DVD player.

7. The voltage level translator of claim 1 wherein the amplifier has an AC reference which is connected to the DC voltage ground.

sub A2  
sub A3  
sub C1  
Add B3